

MERCHANSKIY, Dmid Pavlovich; PIVEN', V.N., inzh., retsenzent;
YAKOBSON, M.O., doktor tekhn. nauk, prof., retsenzent;
POGODIN, B.A., inzh., red.; CHFAS, M.A., red.izd-va;
SHCHETININA, L.V., tekhn. red.

[Gear cutting] Zuboreznoe delo. Moskva, Mashgiz, 1962. 211 p.
(MIRA 16:3)

(Gear cutting)

POGOVIN, B.A.,

AUTHORS: Pogodin, B.A., and Farberov, M.Z., Engineers 117-2-7/29

TITLE: Experience in Modernization of Devices (Opyt modernizatsii prisposobleniy)

PERIODICAL: Mashinostroitel', 1958, # 2, pp 15-18 (USSR)

ABSTRACT: The article describes modernized universal pneumatic clamping heads for metalcutting machine tools at the plant "Ekonomayzer". These clamping heads - of 1,200, 1,600 and 2,500 kg force - are identical in all basic dimensions and can be changed if the clamping force is not sufficient. The heads comprise a pneumatic contactor ("pnevmokontaktor") (Fig.5) serving as a safety device and switching the main machine tool drive off at the moment the pneumatic pressure drops and the clamping head loosens its grip. The illustrations show the "Ekonomayzer" clamping head separately and with clamped milling attachments as well as an attachment for cutting blade blanks. Universal pneumatic clamping heads permit the clamping of all possible attachments for machining work of various shapes. In case of breakdowns in the pneumatic system they can readily be re-set for manual clamping.

There are 11 drawings.

AVAILABLE: Library of Congress
Card 1/1

FOGODIN, B.A., inzh.; SHCHENNIKOV, S.A.

Method for mechanized computation of production norms.
Energomashinostroenie 9 no.5:30-34 My '63. (MIRA 16:7)

(Electric machinery industry)
(Productivity accounting)
(Labor productivity)

Pogodin, B. A.

AUTHOR: Pogodin, B.A., and Barskiy, M.E., Engineers 117-3-3/28

TITLE: Sharpening Precision Hobs (Zatochka pretsizionnykh chervyachnykh frez)

PERIODICAL: Mashinostroitel', 1958, # 3, p 7-9 (USSR)

ABSTRACT: The semi-automatic cutter grinder, model "3A 642" of the Vitebsk Cutter Grinder Plant (Vitebskiy zavod zatochnykh stankov) used at the Leningrad plant "Ekonomayzer" for sharpening hobs of 50 mm diameter and 200 mm length, with straight or helical grooves, is well suited for hobs of conventional accuracy but not for precision hobs designed for cutting the precision gears of turbine gear drives. Precision hobs are made with larger than common diameters and tooth numbers and a much steeper thread angle, which makes precise setting of this particular grinder impossible. Therefore, every tooth of a precision hob has to be finished separately after the automatic grinding cycle.

To facilitate the task of sharpening precision hobs, a two-position switch has been included into the electric system of the grinder to set it either for sharpening every hob tooth separately or for sharpening all hob teeth simultaneously. Special instructions, in accordance with recommendations of the Gear Drive Department of TsNIITMASH, have been composed for

Card 1/2

117-3-3/28

Sharpening Precision Hobs

determining the accumulated circular pitch error; and the depth of metal to be removed from each tooth.

The article contains detailed operation information and design description accompanied by a kinematic diagram of the "3A 642" grinder and its electric diagram, without the two-position switch and with the two-position switch.

There are 3 diagrams.

ASSOCIATION: Leningrad Plant "Ekonomayzer" (Leningradskiy zavod "Ekonomayzer")

AVAILABLE: Library of Congress

Card 2/2

POGODIN, B. A.

BORISHANSKIY, Valentin Vladimirovich, inzh.; GOL'DENBERG, Yefim Ionovich, inzh.; KATS, A.S., dotsent, kund.ekon.nauk, retsenzent; POGODIN, B.A., inzh., red.; LEYKHA, T.L., red.izd-va; BLUDOKANSKAYA, Ye.A., tekhn.red.

[Organization of technical preparation of production in a machinery plant] Organizatsiia tekhnologicheskoi podgotovki proizvodstva na mashinostroitel'nom predpriiatii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 81 p. (MIRA 13:1)
(Machinery industry) (Factory management)

25(5)
AUTHORS: Sukhoparov, A.A., and Pogodin, B.A., Engineers
SOV/117-59-2-11/27

TITLE: The Preparation of the Production System for the Group Machining of Parts at the "Ekonomayzer" Plant (Podgotovka proizvodstva dlya gruppovoy obrabotki detaley na zavode "Ekonomayzer")

PERIODICAL: Mashinostroitel', 1959, Nr 2, p 20 (USSR)

ABSTRACT: The authors tell the experience acquired by the plant in work preparatory to introducing the group machining process, initiated by the plant in 1957 with the help of the Leningrad Branch of the Vsesoyuznyy proyekto-tehnologicheskii institut tyazhëlogo mashinostroyeniya (All-Union Technological-Planning Institute of Heavy Machine Building). The first experience was acquired on turret lathes, for which purpose about 2,000 work items were selected. The head of the turret lathe was regulated for the machining of a given, complex typical item. The lathe could then perform the machining of all items, which were members of the same technological group. The

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SOV/117-59-2-11/27

The Preparation of the Production System for the Group Machining of Parts at the "Ekonmayzer" Plant

work norm was reckoned on the basis of the work time required for the machining of one given item. The work norms for other items were found by the method of interpolation. The article also deals with changes in documentation and other paper work, necessary to the introduction of the group machining process, and with the respective changing of planning, from planning by final products to planning by separate items. There is 1 set of diagrams.

Card 2/2

POGODIN, B.A.

Classification of parts is a basis for the introduction of multiple
machining. Mashinostroitel' no.1:12-15 Ja '64. (MIRA 17:2)

YEREMIN, P.F., inzh.; POGODIN, B.A., inzh.

Classifier of items, their components, and technical documentation
of the basic lines of turbine manufacturing plants. (MIRA 18:2)
Energomashinostroenie 10 no.12:27-31 D '64.

POGODIN, B.A., inzh.

Classification of components is a basis for the creation of modern
technology and work organization. *Energomashinostroenie* 9 no.12:32-
36 D '63. (MIRA 17:1)

POGODIN, B.A., inzh.

Classification of parts is a basis for the organization of industrial
production. Mashinostroenie no.6:3-10 N-D '63. (MIRA 16:12)

POGODIN, B.A.

PHASE I BOOK EXPLOITATION SOV/5676

Azarov, A. S., Candidate of Technical Sciences, Docent, ed.

Prisposobleniya dlya gruppovoy obrabotki detaley; opyt nekotorykh leningradskikh zavodov (Equipment for Group-Machining of Machine Parts; Experience of Certain Leningrad Plants) [Leningrad] Lenizdat, 1960. 254 p. 3,000 copies printed.

Scientific Ed.: P. I. Bulovskiy, Doctor of Technical Sciences, Professor; Ed.: A. E. Lepin; Tech. Ed.: R. G. Pol'skaya.

PURPOSE : This collection of articles is intended for technical personnel and skilled workers in machine and instrument plants; it may also be used by students in schools of higher technical education and tekhnikums.

COVERAGE: Basic principles in the design of universal, universal-setup, and group-machining jigs and fixtures are stated. This equipment is also considered from the standpoint of its application in several Leningrad machine and instrument plants.

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Equipment for Group Machining of (Cont.)

SOV/5676

Examples are given for the grouping of parts according to shape or special processing features. Constructions for group-machining fixtures are presented, and certain problems encountered in parts machining, fixture design, and cutting regimes are discussed. Calculations relating to the economic effectiveness of various types of jigs and fixtures are included in some of the articles. No personalities are mentioned. There are no references.

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Mitrofanov, S. P. [Candidate of Technical Sciences, Lenin Prize Winner]. Methods of Designing Group-Machining Fixtures, and Examples of Their Application

5

Azarov, A. S. and S. T. Gutkin. Fixtures for Group Machining Various Parts of Accessories

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AVAILABLE: Library of Congress (TJ1185.P69)		

Card 3/3

VK/wrc/jw
11-15-61

BORISENKO, F.F.; POGODIN, B.I.

Difficulties of differential diagnosis in periarteritis nodosa.
Khim. med. 38 no.5:126-130 My '60 (MIRA 13:12)
(ARTERIES--DISEASES)

B-1-4

DETERMINATION OF DECARBONISATION (OF STEEL).
G. I. Pogodin (Zavod. Lab., 1934, 3, 526--528).--The
margins of the depression made by forcing a diamond
into steel are distinguished by fissures and wrinkles in
zones of decarbonisation. R. T.

AS 0.11A METALLOGICAL LITERATURE CLASSIFICATION

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F

D

582. DESORPTION OF SOLVENTS FROM ACTIVATED CHARCOAL BY INERT GASES. II. Gorchakov, N. D. and Pogodin, I. I. (J. Appl. Chem. (U.S.S.R.), 1945, 18, 666-8; Chem. Abstr., 1946, 40, 6316)

The desorption rate of EtOH from charcoal by CO₂ was determined at various rates of CO₂ flow (from 0.1 to 1.5 l./sq. cm./min). The optimum conditions are 125-30°, CO₂ flow rate of 0.5 l./sq.cm.min. and 15-min duration. In such a case up to 88.4% of adsorbed EtOH is desorbed with utilization of 1 cu.m. of CO₂ per kg. of EtOH. III. Ibid. 669-72. Desorption of EtOH from charcoal AP was studied by using CO₂ for desorbent at 95-8°, 110-12°, 125-20°. The optimum condition is 125-30° at 0.5 l./sq.cm./min. CO₂ rate. Desorption by CO₂ and N was also studied under conditions of constant use of the charcoal layer; the optimum conditions under this regime are as above, with 91-2% EtOH being desorbed as 95-6% EtOH. The only amount of CO₂ actually needed is that required to fill the apparatus. The method is considerably superior to the commercially used steam desorption. A diagram of the closed system used is presented. IV. N. D. Gorchakov and Z. S. Vanyushina. Ibid. 1946, 19, 97-101. (over)

The dynamic activity of charcoal AP at a layer depth of 100 cm. and benzene concentration of 30 mg./l. is 20-30%, in desorption of benzene by means of CO₂. The optimum time for desorption is 15 min. at 180° at 0.5 l./sq.cm./min. rate of CO₂ flow. It was possible to condense 72% of benzene which was adsorbed on the charcoal, under the above conditions.

POGODIN, I. I.

GORCHAKOV, N.D.; POGODIN, I.I.

Description of solvents from activated charcoal by inert gases.
Zhur. prikl. khim. 31 no.1:60-65 Ja '58. (MIRA 11:4)

1. Laboratoriya sorbtsionnoy tekhniki Leningradskogo tekhnologicheskogo instituta im. Lensoвета.
(Carbon, Activated) (Description)

POGODIN, K.

Head of a working dynasty. Zdorov'e 8 no.11:8-8a N '62.
(MIRA 15:10)

(TRET'IAKOV, TIKHON GRIGOR'EVICH)

POGODIN, K.

Hydraulic engineering

Osushchestvlenaya mehta: (ocherki o sooruzheniy Volgo-Donskogo sudokhodnogo kanala imeni V. I. LĒnina). Moscow, Izdatel'stvo TsK VLKSM "Molodaya Gvardiya," 1953. pp. 136, photos, 22 x 15., 1953

IXII-1

KORSHUNOV, Lev Petrovich. Primal uchastiye SEVAST'YANOV, N.B.,
kand. tekhn. nauk, dots.; KARPOVICH, V.A., inzh., retsenzent;
YUDOVICH, B.S., kand. tekhn.nauk, retsenzent; POGODIN, L.L.,
nauchnyy red.; SMIRNOV, Yu.I., red.; CHISTYAKOVA, R.K., tekhn.
red.

[Power systems of fishing trawlers] Energeticheskie ustanovki
rybolovnykh traulerov. Leningrad, Sudpromgiz, 1963. 295 p.
(MIRA 16:4)

(Fishing boats)

SOLOV'YEV, Yevgeniy Mikhaylovich; POGODIN, L.L., nauchnyy red.;
SMIRNOV, Yu.I., red.; TSAL, R.K., tekhn.red.

[Manual for engineers of commercial fishing boats] Posobie
motoristu rybopromyslovogo sudna. Leningrad, Gos.soiuznoe
izd-vo sudostroitel'noy promyshl., 1960. 354 p. (MIRA 13:11)
(Marine engineering) (Fishing boats)

KARPOVICH, Vladislav Anatol'yeovich. Prinimal uchastiye YEFREMOV,
L.V., inzh.; NEMUS, K.I., inzh., retsenzent; KATSMAN,
F.M., retsenzent; FOGODIN, L.L., nauchn. red.; SMIRNOV,
Yu.I., red.

[Diesel engine plants with controllable pitch propellers]
Dizel'nye ustanovki s vintami reguliruemogo shaga. Lenin-
grad, "Sudostroenie," 1964. 203 p. (MIRA 17:8)

IVANOV, Krasarm Ivanovich; KRYUCHKOV, Vladimir Aleksandrovich;
POGODIN, L.Ye., red.

[Realized dreams; on the 20th anniversary of the liberation of Hungary] Voploshchenye mechty; k 20-letiiu osvobodzheniia Vengrii. Moskva, Znanie, 1965. 38 p. (Novoe v zhizni, nauke, tekhnike. VII Seria: Mezhdunarodnaia, no.6) (MIRA 18:4)

SURKOV, Yuriy Vasil'yevich; POGODIN, L.Ye., red.

[Holiday of the peoples of Czechoslovakia] Prazdnik narodov
Chekhoslovakii. Moskva, Izd-vo "Znanie," 1965. 45 p. (No-
voe v zhizni, nauke, tekhnike. VII Seria: Mezhdunarodnaia,
no.8) (MIRA 18:4)

BECHIN, Aleksandr Ivanovich; POGODIN, L.Ye., red.; SAVCHENKO, Ye.V.,
tekh.n.red.

[Economic conditions in capitalist countries] Ekonomicheskoe
polozhenie kapitalisticheskikh stran. Moskva, Izd-vo "Znanie,"
1960. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniu poli-
ticheskikh i nauchnykh znani. Ser.7. Mezhdunarodnaia, no.23).
(MIRA 14:1)

(Economic conditions)

NALETOV, N.; POGODIN, M.; GRIBANOVA, N.; KISHINEVSKIY, P.

We need help. Sov. profsoiuzy 16 no.22:43 N '60. (MIRA 14:1)

1. Zamestitel' predsedatelya Doma kul'tury, g.Bryansk (for Kishi-
nevskiy).

(Bryansk—Amateur theatricals)

DUDAREV, L.Ye., kand.tekhn.nauk; POGODIN, M.K., inzh.

Contactora with arc suppression for 660 volt networks. Izv.vys.ucheb.
zav.;gor.zhur. 7 no.7:140-143 '64. (MIRA 17:10)

1. Donetskij politekhnicheskij institut.

POGODIN, M. T.; GROBINA, S. Z.; KADYROV, K. K.

Tuberculosis control in Oktyabr'skiy, Bashkirian A.S.S.R.
Probl. tub. 40 no.5:9-13 '62. (MIRA 15:7)

1. Iz Bashkirskogo respublikanskogo protivotuberkuleznogo
dispansera (glavnyy vrach S. G. Safinov, nauchnyy rukovoditel'
M. N. Karnaukhov) i Oktyabr'skogo protivotuberkuleznogo
dispansera (glavnyy vrach K. K. Kadyrov)

(OKTYABR'SKIY (BASHKIRIA)---TUBERCULOSIS---PREVENTION)

POGODIN, M.T.

Grouping of dispensary contingents. Probl. tuberk., Moskva no.2:67-69
Mar-Apr 1953. (GML 24:3)

1. Of Bashkir Republic Anti-Tuberculosis Dispensary (Head Physician --
V. K. Ogorodnikov; Scientific Supervisor -- Docent M. N. Karnaukhov).

POGODIN, N.

26379 Znamya pervenstva. (O rekorde brigady gornoprokhodchikov m. kuznotsova.
mosk. ugol'nyy vasseyn. Ocherk.) Smena, 1949, No. 15, s. 6

SO: LETOFIS' NO. 35, 1949

POGODIN, NIKOLAY

Wrote about an airplane plant near Stalingrad, its destruction during the war and its reconstruction, Stalingradskaya O., RSFSR

SOVIET SOURCE: N: Izvestiya, 9 May 1946, Moscow
ABSTRACTED IN USAF "TREASURE ISLAND", ON FILE IN LIBRARY OF CONGRESS, AIR INFOR-
MATION DIVISION, REPORT NO. 90158. UNCLASSIFIED

POGODIN N.G.

GROSSMAN, R.I., kandidat tekhnicheskikh nauk; POGODIN, N.G., inzhener.

Testing a SUT-47 grain and grass sowing machines at higher speed.
Sel'khoz mashina no. 11:3-8 N '54. (MLRA 7:11)
(Agricultural machinery)

POGODIN, N.G., inzhener-mekhanik.

~~POGODIN, N.G.~~
New machine for threshing hemp. Sel'khoz mashina no.1:13-14 Ja'55.
(MIRA 8:3)

1. Kubanskaya MIS.
(Threshing machines)

POGODIN, N.G.

Apparatus and attachments for testing combines. Trakt. i
sel'khoz mash. 33 no.3:29-30 Mr '63. (MIRA 16:11)

1. Povolzhskaya mashinispytatel'naya stantsiya.

POGODIN, N.G., inzhener.

Problem of selecting the design for granular superphosphate distributors. Sel'khoz mashina no.9:17-18 S '56. (MLRA 9:11)

1. Nauchno-issledovatel'skiy institut tekhnologii avtomobil'nogo transporta i sel'skokhozyaystvennogo mashinostroyeniya.
(Fertilizer spreaders)

POGODIN, N.G., inzh.

New OVP-20B grain-cleaning machine. Trakt. i sel'khoz mash. 30
no.9:37-38 S '60. (MIRA 13:9)

1. Povolzhskaya mashinospytatel'naya stantsiya.
(Grain--Cleaning)

POGDIN, N.G., inzh.

The VS-10 grain cleaning machine. Trakt.i sel'khoz mash. 32
no.4338-39 Ap '62. (MIRA 1524)
(Grain-Cleaning) (Agricultural machinery)

POGODIN, N.G., inzh.

Testing the PKF attachment and automatic governor of the
feeding of the threshing machine of the SK-4 combine.
Trakt. i sel'khoz mash. no.5:23 My '64. (MIRA 17:6)

1. Povolzhskaya mashinopytatel'naya stan siya.

POGODIN, N.G., inzh.

Metal mesh for the air intake opening of the SMD-7 combine diesel engine. Trakt. sel'khozmas. 3l no.1:23-24 Ja '61. (MIRA 1:1)

1. Povolzhskaya mashinospytatel'naya stantsiya.
(Diesel engines)

POGODIN, N.G., inzh.

Results of testing the pick-up equipment of the SK-3 combine.
Trakt. i sel'khoz mash. 31 no.10:31-32 0 '61. (MIRA 14:12)

1. Povolzhskaya mashinoispytatel'naya stantsiya.
(Combines (Agricultural machinery))

ACC-NR: AP7002996

SOURCE CODE: UR/0413/66/000/024/0098/0099

INVENTORS: Smirnov, V. S.; Lameko, L. N.; Pogodin, N. M.; Kucherevich, O. V.;
Bublikov, G. P.

ORG: none

TITLE: A four-stroke three-position liquid distributor. Class 47, 189654

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 98-99

TOPIC TAGS: flow distribution, liquid flow, valve, electromagnetic effect

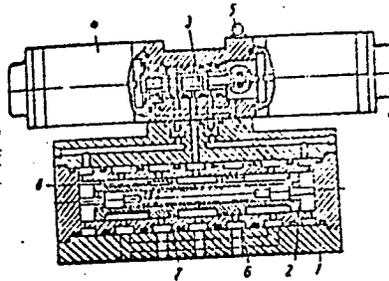
ABSTRACT: This Author Certificate presents a four-stroke three-position liquid distributor with an electromagnetic drive. The distributor contains a casing within which are mounted a distributing and a guiding valve, two driving electromagnets of the pusher type, and a dual manual control (see Fig. 1). To prevent the working liquid from entering the openings of the acting mechanisms after it escapes through the sealing straps of the distributing valve in its neutral position, annular grooves are cut on the central sealing straps of the distributor valve. These grooves are connected through ducts in the body of the valve to the external end surfaces of the central sealing straps.

UDC: 621.646.657-368

Card 1/2

ACC NR: AP7002996

Fig. 1. 1 - casing; 2 - distributing valve;
3 - guiding valve; 4 - electromagnet;
5 - manual control; 6 - sealing strap;
7 - annular groove; 8 - duct



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 26Oct64

Card 2/2

POGODIN, N.Ya.

Economic efficiency of mining thick seams with the use of KTU
supports. Ugol' 39 no.5:58-60 My '64. (MIRA 17:8)

1. Shakhta "Tomusinskaya 1-2", Kuzbass.

POGODIN, N.Ya.

Coal cost reduction at the no.3-3-bis mine in the Kuznetak Basin.
Ugol' 31 no.4:36-38 Ap '56. (MIRA 9:7)

1. Planovyy etdel shakhty No.3-3 bis.
(Kuznetak Basin--Coal mines and mining)(Coal--Costs)

PROCESSES AND PROPERTIES INDEX

Ternary alloys of aluminum, silicon and copper. G. G. URADY, S. A. POKODIN AND G. M. ZAMORUEV. *Mineralog. Zhurn. i Tsvetn. Met.* 4, 160-95(1929). A study by thermal analysis, of the Al triangle up to 24% Si and 40% Cu is given. The alloys in this range consist of mech. mixts. of Si, CuAl, and a solid soln. of Si and Cu in Al. The amt. of Cu is increased by Si in the interval 450-350°. The hardness of the ternary solid solns. was detd. Aging of the alloys at the ordinary temp. diminishes with increasing content of Si. The technical application of the results is considered. B. C. A.

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ASAP-35.1 METALLURGICAL LITERATURE CLASSIFICATION

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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PROCESSING AND PROPERTIES INDEX

B-7-5

BC

Effect of iron on the properties of aluminium.
S. A. FOMONIN (Mik. Syr. Zavet. Met., 1929, 4, 616-624).
 Addition of iron up to 5.4% increases the hardness, electrical resistance, and corrodibility of aluminium; up to 2.6% it increases the tensile strength and decreases the elongation and compressibility.

CHEMICAL ABSTRACTS.

A S D - S L A METALLURGICAL LITERATURE CLASSIFICATION

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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PROCESSES AND PROPERTIES INDEX

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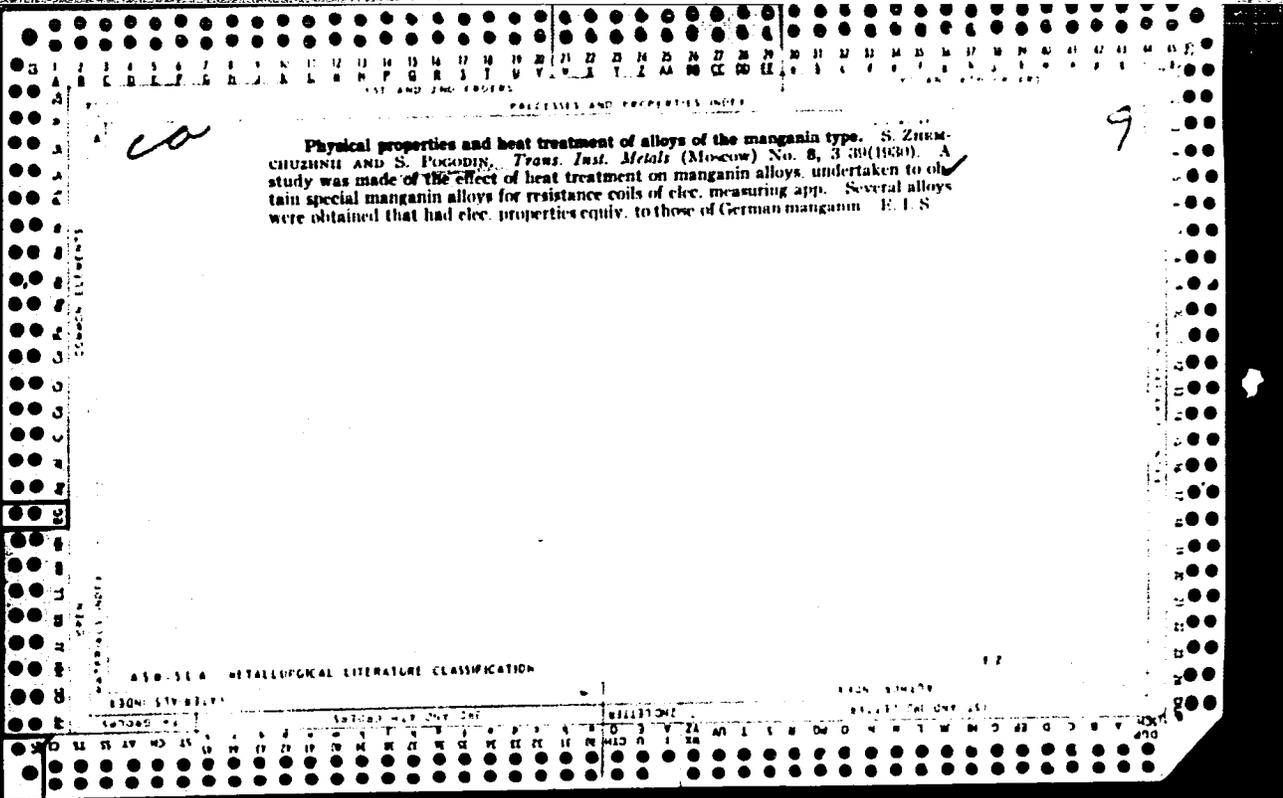
ca

Determination of alumina in aluminum and aluminum alloys. S. A. Pogonin. *Mineralogicheskoe Sootoiznenenie Met.* 4, 54-6; *Chem. Zentr.* 1930, I, 713.—For the detn. of Al_2O_3 in

Al and Al scraps about 1 g. of substance was heated in the porcelain boat in an elec. oven. A Cu-constantan thermoclement served for the measurement of the temp. The air was replaced by H_2 and, after the temp. had reached 250° , a strong current of HCl was passed through. The temp. rises rapidly and $AlCl_3$ sublimes; the reaction is complete after 15-20 min. Al_2O_3 is detd. in the non-volatile residue. For this purpose the residue is calcined, fused with $K_2S_2O_8$, and dissolved in acidulated H_2O ; Cu and other foreign metals are pptd. with H_2S . In the filtrate Fe^{2+} is oxidized to Fe^{3+} and a ppt. of $Fe(OH)_3$ and $Al(OH)_3$ is produced. The calcined and weighed ppt. is fused with $K_2S_2O_8$, dissolved and reduced with Zn. Fe is detd. by titration with $KMnO_4$ soln. The Al_2O_3 content is calcd. from the difference between the 2 values. About 0.1% Al_2O_3 was found in "pure" Al, while Al parts contained 0.00% Al_2O_3 .

G. Schwach

METALLURGICAL LITERATURE CLASSIFICATION



PROCESSING AND PRIORITIES INDEX

Elimination of arsenic from iron ores. B. P. SELIVANOV, S. A. POKROV, A. A. ZUYVACIN, E. YA. LIFSHITZ AND M. YA. JANS-LRVI. *Sovetskoye Vozrozhdeniye Izv. Metall.* 1931, Nos. 3-4, 54-67.—A study of the possibility of eliminating As from Kerchensk iron ores, contg. about 0.13% As on dry basis, by means of gases, was made from 3 angles: (1) temp., (2) nature of the gas and (3) nature of the As compds. in the ore. Parallel with this were also conducted expts. to remove As from artificially prepd. compds. $As_2O_3 \cdot Fe_2O_3$ and $As_2O_3 \cdot Fe_3O_4$. In one series of expts. $As_2O_3 \cdot Fe_2O_3$ was treated with a gas mixt.: Cl_2 10%, CO 20% and CO_2 70%, at 600°, 700°, 800°, 900° and 1000°. In another series, Kerchensk ore was treated with the same gas mixt. also above at 800°, 900°, 1000° and 1100°. In a third series, Kerchensk ore was treated with the gas mixt. Cl_2 1%, CO 22% and CO_2 77%, at 800°, 900°, 1000° and 1100°. Cl_2 does not assist the removal of As and may even be detrimental. Therefore, in a fourth series of expts. Cl_2 was eliminated. Arsenic begins to diminish at 800° and reaches a min. at 1100°. The greatest removal of As from ore at temps. above 900° occurred in a gas mixt. CO CO_2 = (25-40%):(75-60%), or in H_2O vapor when 5-10% coke was added to the ore. In this last case the CO and H_2 , resulting from the H_2O and C reduce As_2O_3 to As_2O_2 or to As . Formation of AsH_3 is also likely. On treatment of the ore with a mixt. of CO H_2 = 1:1 the removal of As is retarded. This can be explained on the ground that a partial reduction of Fe_2O_3 takes place, and the Fe absorbs As and retains it in the solid state. The above results will be used as a basis for a semi-commercial plant for the removal of As from iron ores. Tables and graphs (18) are given. S. L. MADORSKY

METALLURGICAL LITERATURE CLASSIFICATION

E 2

A-1

BC

1ST AND 2ND COILS PROCESSES AND PROPERTIES INDEX

Various types of aluminum with silicon and
 copper, 0.5% to 2.0% silicon, 0.5% to 2.0% copper,
 0.05% to 0.1% iron, 0.05% to 0.1% manganese,
 0.05% to 0.1% magnesium, 0.05% to 0.1% zinc,
 and 0.05% to 0.1% nickel. The alloy is
 used for the manufacture of electrical
 components, such as transformer cores. The
 composition is given in the following table:
 Alloy in the aluminum content: Al-0.5% Si,
 Al-1% Si, containing 0.5% Cu, 0.05% Mn, and 0.05% Ni.
 The composition is given in the following table:

ADD-51A METALLURGICAL LITERATURE CLASSIFICATION FROM DOMIN

FROM STRENGTH	FROM MIP QM V QM	RELATION	FROM DOMIN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100			

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LIST AND THE GROUPS PROCESSES AND PROPERTIES INDEX

CA

Corrosion of galvanized iron in aerated boiling water and in air-steam mixtures. S. A. Pogodin and M. S. Guseva. *Sootskheniya Vozdukhovogo Prostora, Metal.* 7, 84-8(1931).—Galvanized iron exposed to aerated boiling water or to a mixt. of air and steam is much more resistant to corrosion than lead-coated iron. Of the galvanized Fe samples, the one with the thicker Zn coating is the more corrosion-proof. H. Cohen

9

COMMON ELEMENTS

MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

GROUPS

PROCESSES AND PROPERTIES INDEX

5

*Chemical Methods of Testing Zinc-Coated Iron. S. A. Pogodin and M. S. Giumva (*Metallurg (Metallurgy)*, 1962, (10-11), 25-32; (12), 3-12).—[In Russian.] The comparative study of chemical methods of testing zinc-coated iron indicates that the Proce test is characteristic of neither the thickness of the zinc layer, nor of its resistance to corrosion, and serves only as an estimate of its uniformity, but not its quality. Only the methods of Opperie and Bauer can be recommended for general acceptance and control tests. Opperie's method requires less time, while Bauer's method is more convenient, both giving closely similar results. For a qualitative estimation of the resistance to corrosion of electrodeposited zinc coatings Wernlund's test is useful.—N. A.

ASS-55A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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PAVLOVA, Ol'ga Igorevna; POGODIN, S.A., zasl. deyatel' nauki i
tekh. RSFSR, prof., otv. red.; CHERNOV, A.N., red. izd-
va; SIMKINA, G.S., tekh. red.

[History of the technique of electric deposition of metals]
Istoriia tekhniki elektroosazhdeniia metallov. Moskva, Izd-
vo AN SSSR, 1963. 126 p. (MIRA 16:7)
(Electroplating)

POGODIN, S.A.

Chemistry at the Petersburg Academy of Sciences before
M.V. Lomonosov. Trudy Inst.ist.est.i tekhn. 39:3-23 '62.

(MIRA 16:2)

(Academy of sciences of the U.S.S.R.) (Chemistry)

POGODIN, S.A., prof.; BERKOVICH, Ye.S., kand.tekhn.nauk

"Microhardness of metals" by V.M.Glazov and V.N.Vigdorovich. Reviewed
by S.A.Pogodin, E.S.Berkovich. Zav.lab. 29 no.5:638-639 '63.

(MIRA 16:5)

(Metals--Testing) (Hardness) (Glazov, V.M.) (Vigdorovich, V.N.)

PROCESSES AND PROPERTIES INDEX

18

**The Production and Properties of Manganese. S. A. Pogodin and E. M. Lokarenko (Metallurg (Metallurgist), 1953, (1), 70-83). [In Russian.] Manganese is melted in graphite crucibles and in a crude-oil furnace. Electrolytic copper and nickel are first alloyed in the covered crucible under a layer of charcoal, and the manganese, preheated to 200°-400° C., is then introduced. The casting temperature is about 1080°-1100° C, and the surface of the ingots is planed to remove surface defects. Before rolling, the ingots are soaked for 1 hr. at 800°-850° C. During rolling, it is essential to use only small reductions in the first 3-4 passes but thenceforward the rolling down to 0.5 mm. is continued as for copper. Prior to drawing the rolled piece is annealed at 700°-750° C. for 1-5 hrs., and pickled at 60°-70° C. in 10% sulphuric acid containing 2% of chromic acid. Drawing is carried out as for copper, with intermediate anneals at 850°-900° C. and a final anneal at the same temperature. Annealed Manganese has a minimum tensile strength of 42 kg./mm.², elongation 20%, specific electrical resistance 41 μΩ/cm.², thermal coeff. of electrical resistance + 0.00001-0.00003 with a maximum thermo-electric power of 1μV/1°. - N. A.*

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

ELECTRONIC INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

5TH AND 6TH ORDERS

7TH AND 8TH ORDERS

9TH AND 10TH ORDERS

11TH AND 12TH ORDERS

13TH AND 14TH ORDERS

15TH AND 16TH ORDERS

17TH AND 18TH ORDERS

19TH AND 20TH ORDERS

21ST AND 22ND ORDERS

23RD AND 24TH ORDERS

25TH AND 26TH ORDERS

27TH AND 28TH ORDERS

29TH AND 30TH ORDERS

31ST AND 32ND ORDERS

33RD AND 34TH ORDERS

35TH AND 36TH ORDERS

37TH AND 38TH ORDERS

39TH AND 40TH ORDERS

41ST AND 42ND ORDERS

43RD AND 44TH ORDERS

45TH AND 46TH ORDERS

47TH AND 48TH ORDERS

49TH AND 50TH ORDERS

51ST AND 52ND ORDERS

53RD AND 54TH ORDERS

55TH AND 56TH ORDERS

57TH AND 58TH ORDERS

59TH AND 60TH ORDERS

61ST AND 62ND ORDERS

63RD AND 64TH ORDERS

65TH AND 66TH ORDERS

67TH AND 68TH ORDERS

69TH AND 70TH ORDERS

71ST AND 72ND ORDERS

73RD AND 74TH ORDERS

75TH AND 76TH ORDERS

77TH AND 78TH ORDERS

79TH AND 80TH ORDERS

81ST AND 82ND ORDERS

83RD AND 84TH ORDERS

85TH AND 86TH ORDERS

87TH AND 88TH ORDERS

89TH AND 90TH ORDERS

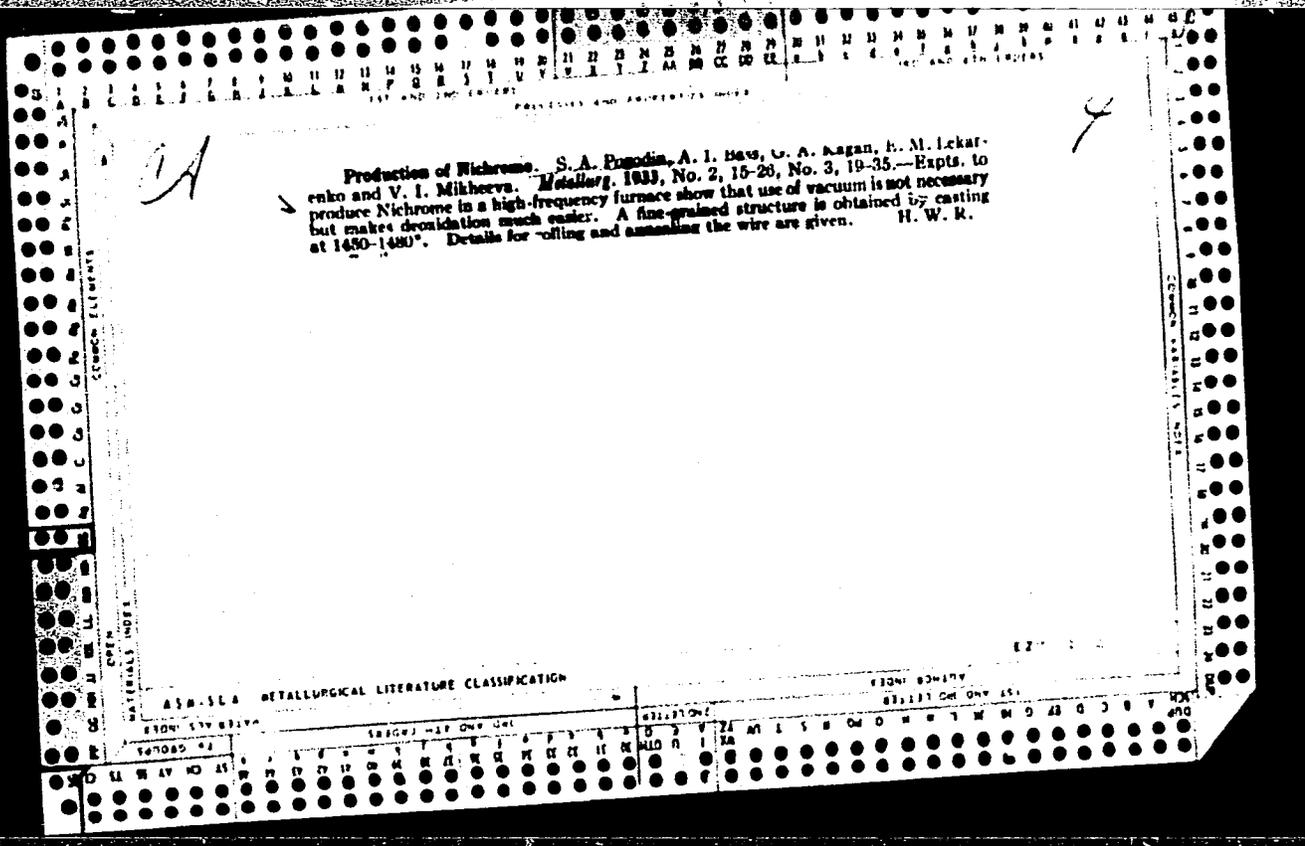
91ST AND 92ND ORDERS

93RD AND 94TH ORDERS

95TH AND 96TH ORDERS

97TH AND 98TH ORDERS

99TH AND 100TH ORDERS



1ST AND 2ND GROUPS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH GROUPS

Ca *7*

Ternary system: aluminum-copper silicon. G. G. Urazov, S. A. Pogodin and G. M. Zamoruev. *Ann. Inst. anal. phys. chim. (Leningrad)* 6, 265-6(1933); *Met. Abstracts (in Metals & Alloys)* 3, 42.---The thermal method was used for construction of the liquidus of the part of the ternary diagram in concns. up to 24% Si and 40% Cu. The boundary of the ternary solid solns. of Cu and Si in Al at different temps. was detd. by microscopic investigation of the quenched alloys. The ternary eutectic has the compn: Si 5, Cu 27 and Al 68% and the temp. 525°. The hardness of the ternary alloys was also detd. by Brinell method. G. G.

A 50-55A METALLURGICAL LITERATURE CLASSIFICATION

GROUP 1 GROUP 2 GROUP 3 GROUP 4

7 037 69

LIST AND PROPERTIES

PROCESSES AND PROPERTIES INDEX

2

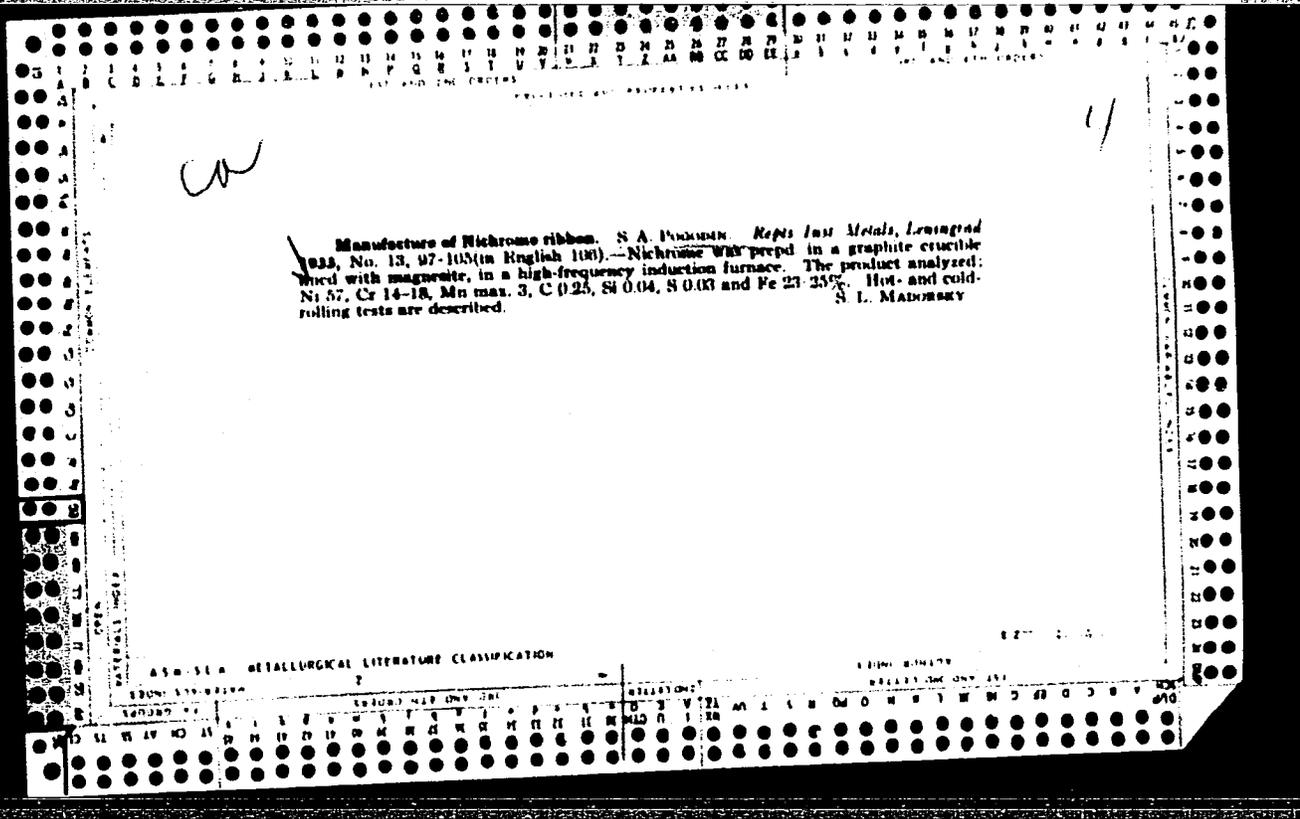
M

Ultra-Light Alloys of Great Strength. S. A. Ivanov (Izvestia Institut Fiziko-Khimicheskogo Analiza (Ann. inst. anal. phys. chem., 1933, 6, 295-310; C. Abstr. 1934, 28, 390).—[In Russian.] A review of physico-chemical properties of commercial magnesium and of the physico-chemical properties and phase diagrams of the alloys of magnesium with metals of groups I, II, and III of the periodic table. A bibliography of 62 references is given. - 8, 61.

A 59-114 METALLURGICAL LITERATURE CLASSIFICATION

AUTOMATIC INDEX

MATERIALS GROUPS		SUBGROUPS																	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T



1ST AND 2ND ORDER

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDER

M

On the Production and Properties of Pure Manganese. R. A. Puzodin
(Metallurg (Metallurgia), 1966, (2), 101-110).-- [In Russian.] A review of the
literature. N. A.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDER

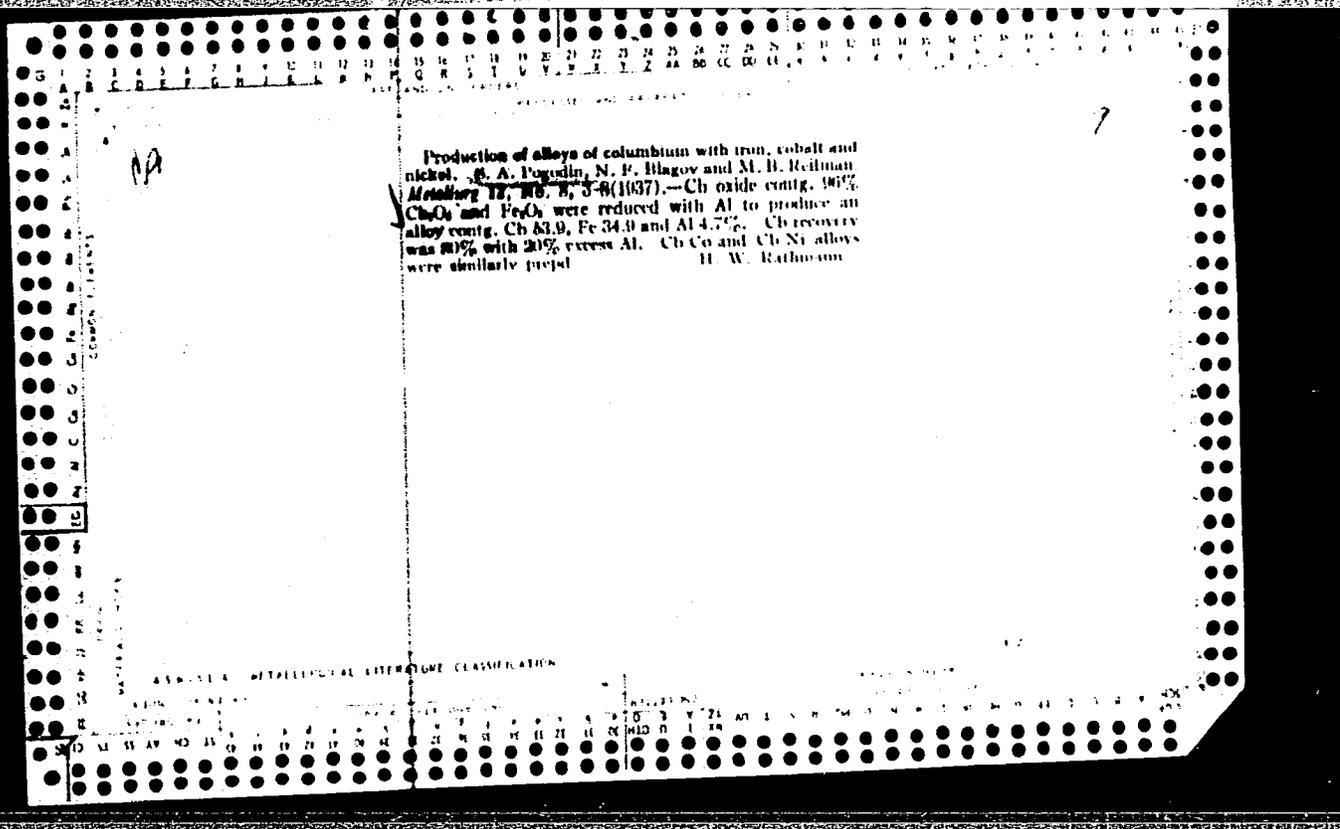
3RD AND 4TH ORDER

1ST AND 2ND ORDER

3RD AND 4TH ORDER

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
<p>M</p> <p>*Limits of the α-Phase in the System Copper-Cadmium. S. A. Pogodin, V. I. Micheeva, and G. A. Kagan (<i>Izvestia Instituta Fiziko-Khimicheskogo Analiza (Ann. Inst. Anal. Phys.-Chim.)</i>, 1935, 7, 39-47).—[In Russian.] The solid solubility of cadmium in copper is: room temperature 1.0%; 250° C., 1.2%; 400° C., 1.6%; 475° C., 2.1%; 525° C., 2.5%; and 550° C., 2.8%. The limits of the α-phase were determined.—S. G.</p>					
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION				E-2	
MATERIALS INDEX		1ST AND 2ND ORDERS		3RD AND 4TH ORDERS	
1ST AND 2ND ORDERS		3RD AND 4TH ORDERS		1ST AND 2ND ORDERS	

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
M															2				
<p>*Experiments on Alloying Niobium with Iron, Cobalt, and Nickel. N. A. Pogudin, N. F. Blagov, and M. B. Reifman (<i>Metallurgy (Metallurgiya)</i>, 1957, (8), 2-8). [In Russian.] The authors have developed an aluminothermic method for obtaining alloys of iron with niobium 3.33-47.62, tantalum 0.18-4.94, and aluminum 0.10-0.33%. Microstructural analysis shows the existence of the compound Fe₃Nb, in which iron dissolves to a limited extent. The eutectic between the solid solution of niobium in iron and Fe₃Nb lies at 15.50% niobium. Alloys also obtainable by means of aluminothermy are: (1) 63.0% Co, 36.0% (Nb + Ta) calculated as pure Nb, 9.87% Fe, 0.02% Al; (2) 20.8% (Nb + Ta); 00.3% Ni, 8.7% Fe, 0.50% Al.—N. A.</p>																			
ASM-52A METALLURGICAL LITERATURE CLASSIFICATION										FROM SOURCE									
SOURCE SYMBOL										SOURCE ORIGIN									
SOURCE NO.										SOURCE ORIGIN									



PROCESSING AND PROPERTY INDEX

(1ST AND 2ND COPIES)

METALLOGICAL LITERATURE CLASSIFICATION

633.114

*Nickel-Niobium Alloy. S. A. Lyudskanov and A. N. Zelikman (*Metallurg* (Moscow), 1969, (1), p. 14) [in Russian]. An aluminothermic process for the production of nickel-niobium hardeners, containing up to 70% niobium and only a minute admixture of aluminum, was developed. Micro-examination and hardness measurements point to the existence of a compound Ni₃Nb. The limiting solubility of niobium in nickel at 900° C. is between 11 and 12 weight-% niobium. The corrosion-resistance of nickel towards hydrochloric acid increases with addition of niobium up to the solid solubility limit.—N. A.

METALLOGICAL LITERATURE CLASSIFICATION

633.114

LIST AND INDEX ORDERS
PROCESSES AND PROPERTIES INDEX

CA

9

The effect of small additions of magnesium and silicon on the properties of beryllium bronze. S. A. Pogodin and N. Kh. Abrikosov. *Metallurg* 1939, No. 12, 57-63; *Khim. Refrat. Zhur.* 1940, No. 8, 81.-P. and A. investigated the effects of Mg (0.05, 0.2, 0.4 and 0.6%) and Si (0.15, 0.3 and 0.5%) added separately on the properties of Be bronze contg. 2.0 and 2.5% of Be, and studied the mech. properties of rolled alloys after heat-treatment and aging at 270, 310 and 350°. 0.05% of Mg has no effect on the mech. properties. Higher contents of Mg (more than 0.24%) sharply decrease the mech. properties owing to the appearance of the Cu₂Mg phase. Si in amts. of not more than 0.3% is permissible. Optimum mech. properties are possessed by bronzes contg. Si 0.12 and Be 2.5% and contg. Si 0.05 and 0.14% and Be 2%.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL AND INDEX LETTERS

MATERIALS INDEX

OPEN

COMMON ELEMENTS

PROCESSES AND PROPERTIES INDEX

*Copper-Zirconium Alloys. B. A. Pogodin and I. S. Shubova (*Izv. Akad. Nauk SSSR, Fiziko-Khimich. Analiz.*, 1940, 12, 225-232).—[In Russian.] Copper-zirconium alloys containing up to 35-65% zirconium were prepared by melting in a magnesite crucible in a Kryptol furnace, the best results being obtained when using a K(1-NaCl) mixture in equimolecular proportions as flux. The constitutional diagram was determined by thermal analysis and confirmed by microscopic examination. The liquidus consists of two branches marking the primary crystallization of copper and of the β phase, respectively. The point of intersection of the eutectic is at 12.9% zirconium, 980° C. The β phase consists of the compound Cu₂Zn (32.65% zirconium) with a melting point of 1138° C. The solubility of zirconium in copper was investigated microscopically. The limiting solubilities are 0.9% at 925° C., 0.7% at 825° C., and 0.25% at 600° C. These experimental results agree very well with those calculated from Le Chatelier's expression. The existence of precipitation-hardening in copper-zirconium alloys was confirmed by hardness tests on cast alloys quenched from 900° C. and heat-treated at 300° C. for periods up to 20 hrs. The hardness-heat-treatment-time curves after falling to a minimum at the beginning rise to a well-marked maximum, the hardness then falling off slightly, and after passing through a second flat maximum ultimately declining.—A. B.

2

METALLURGICAL LITERATURE CLASSIFICATION

A18-31A

COMMON VARIABLES INDEX

COMMON ELEMENTS

OPEN

MATERIAL INDEX

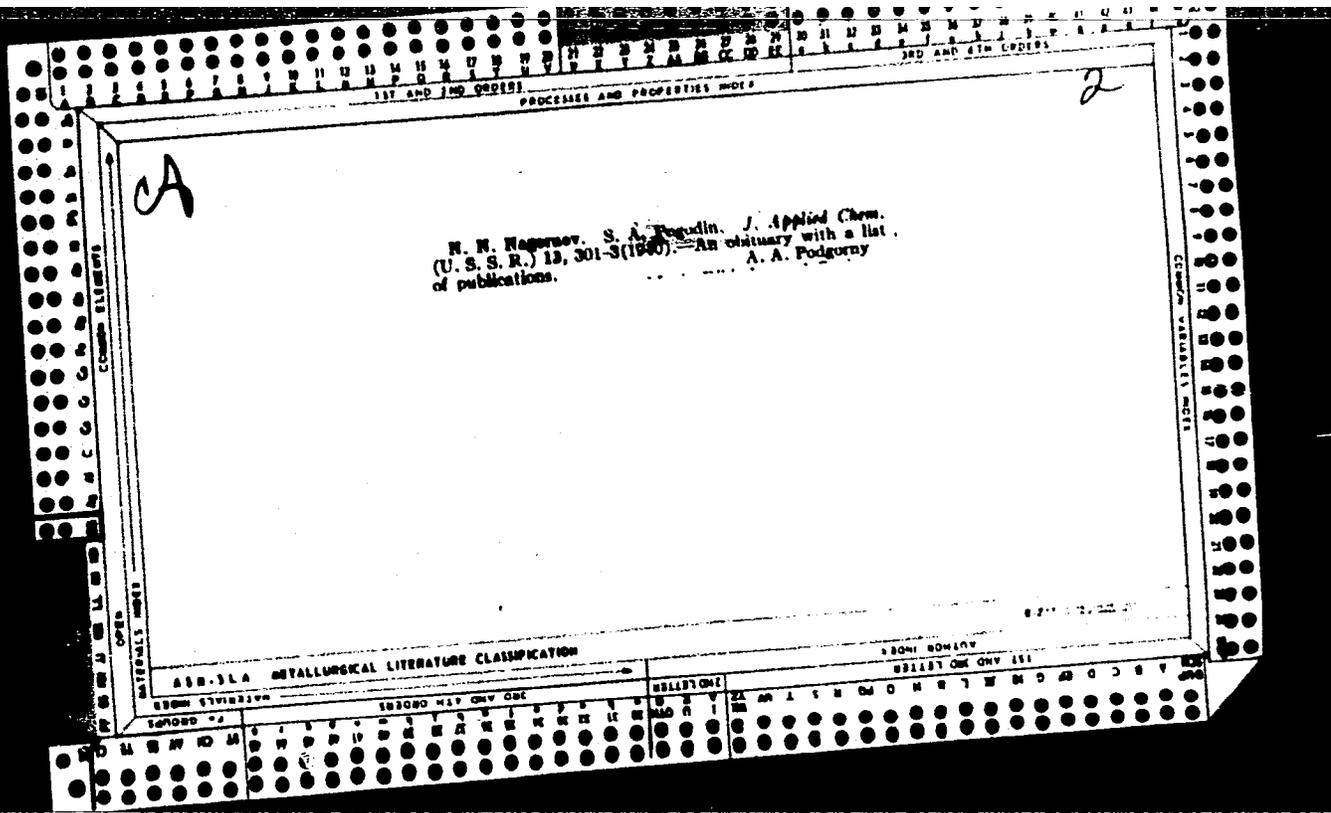
PROCESSED AND PROVIDED UNDER
THE AUTHORITY OF THE CODE OF FEDERAL REGULATIONS
TITLE 32, PART 1985

*Phase of Variable Composition in the Lead-Sodium System. N. D. Kur-
nakov, S. A. Pogodin, E. S. Shpichinetskiy, and V. S. Zarin (*Izv. Akad. Nauk
Fiziko-Khimich. Analiz. (Ann. Soc. Ser. Anal. Phys.-Chim.)*, 1940, 18, 233-
250).—[In Russian.] The constitutional diagram of the lead-sodium system
was re-examined by thermal analysis for alloys with up to 10% sodium (50
atomic-%). The results agree satisfactorily with those of other investigators.
The liquidus consists of three branches corresponding respectively to the
primary crystallization of α (0-21 atomic-% sodium), β of variable composi-
tion (21-39.5 atomic-% sodium), and the compound NaPb (39.5-50 atomic-%
sodium). The $\alpha + \beta$ eutectic (21 atomic-% sodium) melts at 310° C.; the
 $\beta + \text{NaPb}$ eutectic (39.5 atomic-% sodium) at 290° C. The melting point
of NaPb is 370° C. The solid solubility of sodium in lead was determined by
hardness tests and found to decrease with temperature from 14.4 atomic-%
at the eutectic temperature to 2.8 atomic-% at room temperatures. The
latter figure was confirmed by investigations on age-hardening at room
temperature. Quenched specimens aged more rapidly than chill-
cast specimens, and alloys with more than 0.65% (5.4 atomic-%) sodium—the
limiting solubility at 100° C.—aged still more rapidly on heating to that
temperature. Comparison with cadmium, mercury, tin, arsenic, antimony,
and bismuth showed that sodium has the maximum hardening effect on lead.
Investigations by hardness tests and electrical-conductivity measurements

confirmed the variable composition of the β phase and gave its homogeneity
limits as 28-33 atomic-% sodium. AB

ASM-314 METALLURGICAL LITERATURE CLASSIFICATION

FROM BOMBYN
811131 Oct 04 1951



1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

ca

9

Solid solutions of beryllium and magnesium in copper. S. A. Pogodin and I. S. Shumova. *Bull. acad. sci. U. R. S. S. R. Class. sci. chim.* 1940, No. 5, 763-74.—Twelve alloys contg. 0.5-2.5% Be and 0.4-0.8% Mg were investigated, and the copper corner of the ternary system Cu-Be-Mg was detd. by means of methods of thermal analysis, microstructure and hardness. Electrolytic Cu and Cu-Be-Mg alloys, contg. 7.6-10.0% Be and 1.1-4.3% Mg, and also a Cu-Mg alloy with 27% Mg were used for making these alloys. The limits of the α -phase, i. e., ternary solid soln. of Be and Mg in Cu at 800°, 650°, 500° and 250°, sepg. the region of α -phase from the adjacent heterophasic regions were detd. The mutual decrease of soly. of Be and Mg in solid Cu by each other is shown. The aging of all ternary alloys obtained and the retarding of the aging of alloys contg. 2.0 or 2.5% Be and 0.4-0.8% Mg were studied. Alloys contg. 2.5% Be and 0.4% Mg as well as 1.8% Be and 0.4-0.8% Mg, after hardening at 890° and aging at 350°, have the same hardness as the Mg-free alloys with 2.8% Be, but they have less impact strength than Mg-free bronzes. Aging appeared in alloys contg. 0.5% Be and 0.8-2.8% Mg. 18 references. S. Machelson

COMMON ELEMENTS

NATIONALS INDEX

ASB-35A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

10

M

***Copper-Zirconium Alloys.** S. A. Pogodin, I. S. Shumova, and F. A. Kugutshera (*Compt. rend. (Doklady) Acad. Sci. U.R.S.S.*, 1940, **27**, 670-672; *Brit. Abs.*, 1940, [A 1], 18).—Thermal analysis of copper-zirconium alloys containing up to 30% of zirconium shows primary crystallization of copper-rich solid solutions and of Cu₂Zr or solid solutions of copper in (Cu₂Zr, with a eutectic at 980° C., 12.9% of zirconium. The dystectic point corresponding to Cu₂Zr is at 1140° C., 32.4% of zirconium. The microstructure of quenched samples annealed at various temperatures shows that the solubility of zirconium in copper is 0.9% at 925° C., 0.7% at 825° C., and 0.28% at 600° C. The addition of 0.14-0.30% of zirconium increases the resistance of work-hardened copper to annealing at 400-500° C., and decreases its conductivity by 1-15%.

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LIST AND 2ND CATEGORIES

PROCESSES AND PROPERTIES INDEX

ca

The electric conductivity and hardness of Mn-Cu alloys.
 S. A. Pogodin. *Ann. secteur anal.-phys. chim., Inst. chim. gen. (U. S. S. R.)* 13, 397-405(1941); *Khim. Referat. Zhur.* 6, No. 9, 37(1941); cf. Zhemchuzhnyx and Petrashevich, *C. A.* 12, 358.—Newest data are given on the diagram of state of the system Cu-Mn and on the prepn. of pure Mn by vacuum distn. and by electrolysis of aq. solns. of Mn salts. The properties of polymorphous modifications of Mn are discussed and the reasons for the difference in the results of various authors in their studies of the elec. resistance and hardness of Cu-Mn alloys are detd.
 W. R. Henn

9

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GENERAL INDEX

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GENERAL INDEX

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GENERAL INDEX

PROCESSED AND PREPARED UNDER THE AUTHORITY OF THE NATIONAL ARCHIVES

METALLURGICAL LITERATURE CLASSIFICATION

AS 2-314

12

N. B. V.

The Mechanical and Electrical Properties of Solid Solutions of Zirconium in Copper. S. A. Pogodin and F. A. Kugucheva (*Izv. Akad. Nauk S.S.S.R.*, 1941, 14, 235-261).—[In Russian.] Cf. *Anal. (Abstr. Nauk S.S.S.R.)*, 1941, 14, 235; *Met. Abs.*, 1941, 8, 295. P. and K. have determined the tensile strength, elongation, electrical resistance and conductivity at 25° and 100° C., and temperature coeff. of resistance in the range 25°-100° C. of copper-zirconium alloy wires containing 0.14, 0.30, and 0.74% zirconium, as drawn and also after 30 minutes' annealing at 200°, 300° C. at 100° C. intervals. In addition, the age-hardening properties of these three alloys and of a fourth containing 1.12% zirconium were studied by taking Brinell hardness measurements on small ingots (i) as quenched after 3 hrs. at 900° C., (ii) as subsequently annealed to 60% reduction in thickness, 300° C., and (iii) as quenched, cold-rolled to 60% reduction in thickness, and annealed at 300°, 350°, and 400° C. The greatest Brinell hardness (123) was given by the alloy containing 0.74% zirconium, quenched, cold-rolled, and aged for 16 hrs. at 300° C. The results, which are given in a series of tables and graphs, lead to the conclusion that small additions (0.15-0.30%) of zirconium may be useful in cases where copper must retain its hardness and strength on heating to 400°-500° C. without serious reduction of conductivity. Hence one may expect copper with 0.15-0.30% zirconium to be used for parts of electrical apparatus which are subject to heat and pressure in service.

9

CA

Ternary alloys of magnesium with aluminum and cerium. S. A. Pogodin and V. I. Mikheeva. *Izv. Akad. Nauk SSSR, Ser. Khim.* (1941) 14, 283-97 (1941). To study the Mg end of the Mg-Al-Ce system, an investigation was made within the limits of the first binary compds. AlMg₂ (51.6% of Mg) and CeMg₂ (30.1% of Mg). Equil. in the triangle Al-Mg-Ce compds. is characterized by the crystn. of at least 3 Al-Ce compds. The most stable of these is Al₂Ce. Al₂Ce is manifested by its forming a double eutectic with the γ -phase and a triple eutectic with the α -soln. and Al-Ce at 541°. In the region of Al-Ce-Mg-CeMg₂ appears a const. point which is presumably a triple eutectic of Al₂Ce, α -soln., and CeMg₂. The appearance of the highly refractory Al-Ce compds., and particularly Al₂Ce, hinders the expln. finding of all the equil. components. This is particularly so for alloys with a high Al content. The soln. of Ce in Mg declines with the abdn. of Al. The soln. of Ce in alloys along the Mg-Al side is very small. The soln. of Al in Mg is affected insignificantly by addn. of Ce up to 1.5% Ce up to 0.3, and particularly up to 0.1%, retards the aging of Mg-Al alloys. The max. aging effect remains the same as that of the binary Mg-Al alloys.

M. Hoch

METALLURGICAL LITERATURE CLASSIFICATION

Diagram of state for the nickel-niobium system. S. A. Ivogodin and A. N. Zelikman (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **81**, 895-897).—Thermal analysis indicates the existence of an α phase from 0 to 23.5% Nb, consisting of a solid solution of Nb in Ni, a β phase from 23.5 to 51.6% Nb, consisting of a solid solution of Nb in Ni₃Nb, and from 51.6% Nb upwards another compound, probably NiNb, which separates as a γ phase. There are two eutectics, one on each side of Ni₃Nb. One consists of α and β phases, contains 23.5% Nb, and has m.p. 1270°. The second has m.p. 1175°. The hardness of these alloys has been investigated. The solubility of Nb in Ni was studied by examining the microscopic structure of a series of Nb-Ni alloys. A I M

PROCESSING AND PROPERTIES INDEX

2

Antonio Lavoisier, the founder of the chemistry of modern times, the biographical of his birth. S. A. *Uspoln. Khim.* 13: 250-56 (1943) — Emphasis placed on the influence of Lavoisier's teachings on Russian scientific development. A summary is included. *Chemistry of L. L. Lavoslav. Ann. 1942-47* "Comments" is included by A. L. Lavoisier. *Ann. 1942-47* "Comments" is included on the above papers of A. L. Lavoisier. *Ann. 1942-47* F. H. Rainesman

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

METALLURGY

C O P Y

C O P Y

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

1ST AND 2ND GROUPS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH GROUPS

CCORRER ELEMENTS

2

M

The History of the Study of Solid Solutions. N. S. Kurnakov and R. A. Ponomarev (*Izvest. Sekt. Fiziko-Khim. Anal.*, 1943, 16, (1), 7-12).-- [In Russian].
A short account.-- N. A.

MATERIALS INDEX

AS 51 A METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

2

...on ranges of various composition in the Nickel-Niobium System. S. A. Pogodin and A. N. Zelikman (*Izvest. Sekt. Fiziko-Khim. Anal.*, 1943, 16, (1), 168-169).—[In Russian]. The nickel-niobium system has been studied up to 64 wt.-% niobium by the methods of thermal and microstructural analysis and, in part, by measurements of hardness and electrical resistance. The solubility (in wt.-%) of niobium in nickel is 20.3 at 1258°, 18 at 1200°, 15 at 1100°, and 10.7 at 800° C. Nickel forms a compound with niobium, corresponding to Ni₃Nb, which melts at 1403° C. and forms solid solutions with its component metals in the range 32.5-36 wt.-% niobium. Ni₃Nb has a lattice different from those of nickel and niobium, and it is marked by a minimum on the hardness-composition curve. Solid solutions based on Ni₃Nb form two eutectics: (a) with the solid solution of niobium in nickel at 23.5 wt.-% niobium, 1275° C.; and (b) with the niobium-rich γ -phase at 51.6 wt.-% niobium, 1175° C.—D. A.

METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDER PROCESSES AND PROPERTIES MODEL

2

CA

S. A. Paganin: (Outlines of the History of the Academy of Sciences (U.S.S.R.), Chemical Sciences.) Moscow: Academy of Sciences. Printed by the 2nd Printing House of the Pub. House of the Academy of Sciences. 1945. 118 pp. 6 R.

COMMON VARIABLES MODEL

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM DOMINY

1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

FROM STRUBELV

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COMMON VARIABLES MODEL

CA

History of chemistry in the Academy of Sciences of the U.S.S.R. during 220 years. S. A. Puzanin. *Dokl. akad. nauk S.S.S.R.* 1945, 170-74. Historical review from 1725 to the present time, by periods and by branches: general and inorganic, organic, physical chemistry. N. Thon

ASB-51A METALLOGICAL LITERATURE CLASSIFICATION

FROM	TO	CLASSIFICATION	INDEXED	FILED	DATE
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
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79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102

PA 54766

USSR/Metals
Lead Alloys
Magnesium

8ep 1947

"Solid Solutions of Magnesium and Lead," N. S. Kurakov (Deceased), S. A. Pogodin, T. A. Vidusova, IONIN, AV, SSSR, Leningrad Polytech Inst Imeni M. I. Kalinin Lab Gen Chem, 4 1/2 pp

"Izv Sektora Fiz-Khim Analiza" Vol XV

Using data obtained in 1929, describes physical-chemical methods of analyzing lead solutions which have small additions of magnesium. Lead solutions with small additions of magnesium, lent themselves readily to natural aging. Hardness of aged cast
54766

LC

8ep 1947

USSR/Metals (Contd)

alloys, with 0.5 to 0.7% by weight of magnesium, was 15. Hardness of alloys which had 1.4% by weight of magnesium was as much as 20. Submitted, 15 Nov 1940.

POGODIN, S. A.

LC

54766

ANOSOV, V. Ya. and POGODIN, S. A.

Osnovnye Nauala Fiziko-Khimieskogo Analiza (Elementary Fundamentals of Physical-Chemistry Analysis), 876 p., Publishing House of AS USSR Moscow, 1947.

POGODIN, S. A.

PA 58T2

USSR/Academy of Sciences
Chemistry - History

Oct 1947

"Thirty Years of Soviet Chemistry," Prof S. A.
Pogodin, Dr Chem Sci, Assoc Prof Sci Engin, 4 pp

"Nauka i Zhizn'" No 10

General account of 30 years of development of chem-
istry in Soviet Union. Mentions names of scientists
most responsible for great advances made in Soviet
chemistry.

58T2

POGODIN, S. A.

PA 54T64

USSR/Metals
Lead Alloys
Lithium

Sep 1947

"Solid Solutions of Lithium and Lead," S. A. Pogodin,
Ye. S. Shpichinetskiy, IONKh, AN, SSSR, Sci Res Inst
Polygraph Pub Techniques, 7½ pp

"Izv Sektora Fiz-Khim Analiza" Vol XV

Records some studies made concerning lead angle in
triple system lead-sodium-lithium. Purpose is better
understanding of solid solutions of lithium and lead.
Among phenomena observed was aging of alloys at room
temperature. Submitted, 20 Nov 1940.

LC

54T64

CA

7

Ternary alloys of lead with sodium and lithium. S. A. Nagelski and E. S. Shpichnetski (Inst. Gen. and Inorg. Chem., Acad. Sci. U.S.S.R., Moscow). *Izvest. Sektora Fiz.-Khim. Anal. Inst. Obshch. i Neorg. Khim., Akad. Nauk S.S.S.R.* 15, 96-111(1947); cf. *C.I.* 36, 4791⁴; and preceding abstr.—Pb-Na-Li alloys with up to 50 at. % of Na and up to 50 at. % of Li were subjected to thermal

analysis and their hardness and microstructure were studied. On the system's phase diagram the surface of the liquidus comprised 4 areas of crystal of α , β NaPb and LiPb phases. The system formed 3 eutectics: (1) m. 231° contained Li 16 at. %, Na 5 at. %, and the rest Pb, (2) m. 265° contained Li 12.3 at. %, Na 27.5 at. %, and the rest Pb, and (3) a eutectic formed by NaPb and LiPb, m. 310°, and contg. Li 15 and Na 35 at. %. On the phase diagram was clearly seen the existence of a berthollite type β -phase. The boundaries of the triple solid soln. at 200 and 20°, regarded only as an approximation, were also detd. The alloys with greatest hardness had Na 0.0-0.8 and Li 0.03-0.06%. M. H.

117 AND 119 ORDERS 118 AND 119 ORDERS

PROCESSES AND PROPERTIES INDEX

CA

New biographical material about D. I. MENONOV.
S. A. Pogodin. *Uspehi Khim.* 16, 217-30(1947).
N. Thon

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBOLS

FROM SYMBOLS

FROM LETTERS

FROM LETTERS

FROM LETTERS

FROM LETTERS

PA40T6

POGODIN, S. A.

USSR/Chemistry - Literature
Chemistry - Biographies

Sep/Oct 1947

"Thirtieth Anniversary of Soviet Chemical Literature,"
S. A. Pogodin, Moscow, 5 pp

"Uspekhi Khimii" Vol XVI, No 5

Briefly discusses advances made in Soviet chemical literature. Describes various major contributors and some of their more important articles. Photographs of such scientists as A. V. Palladin, M. M. Dubinin, and A. N. Terenin.

LC

40T6

CA

Attempts at using the method of microhardness in physico-chemical analysis of metal systems. S. A. Pogodin, L. M. Kefeli, and E. S. Berkovich. *Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 17, 193-9(1949).—Six basic types of compn. microhardness are derived for 2-component systems: (1) the components *A* and *B* are mutually sol. in all proportions; (2) *A* and *B* crystallize in their pure states from a liquid phase; (3) *A* and *B* form a compd. A_mB_n ; (4) *A* and *B* form a limited solid soln. with a eutectic; (5) the components form a daltonide A_mB_n , which combines with its components to yield a limited solid soln., and in addn. 2 solid solns. are formed based on *A* and *B*, resp.; and (6) in addn. to 2 solid solns. based on *A* and *B*, resp., form a berthollide. The above was tested experimentally on the systems Sn-Mg and Pb-Mg. No solid solns. based on Mg₂Sn were found. There was found a small region occupied by a solid soln. based on Mg₂Pb.
M. Hoseh

CA

9

Diagram of state of the system aluminum-indium. S. A. Bogodin and I. S. Shumova. *Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 17, 200-3(1949).—Al and In did not combine into chem. compds. In the liquid state they were mutually sol. only to a limited extent. At 640° the sepn. into layers extended from 12 to 97% In. There were practically no solid solns. in the system. The system formed a eutectic which crystallized at 152°.
M. Hosh

CA

Diagram of state of the system indium-antimony. S. A. Pogoda and S. A. Dubinskii. *Izvest. Sektora Fiz.-Khim. Khim. Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 7, 204-8 (1949).—Indium and Sb were mutually sol. to an unlimited extent in the liquid phase. Upon cooling they crystd. into 3 solid phases In, Sb, and InSb. The latter melted at 530° and formed with its component 2 eutectics of which one was located near pure In and melted at 155°, and the other contg. 70.4 at.% of Sb, m. 505°. M. Hosh

POGODIN, S.A.; KEFELI, L.M.

Study of solid solution of the Mg-Pb-Sn system rich in magnesium.
Izv. Sect. fiz. khim. anal. 18:86-91 '49. (MIRA 11:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
AN SSSR.

(Magnesium) (Lead) (Tin)